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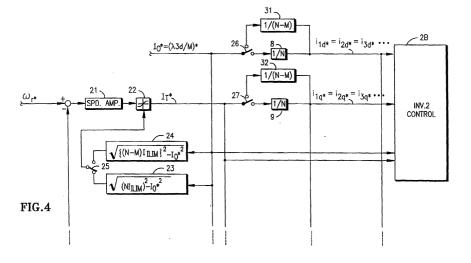
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(54) Curtailed operation of multiple-wound induction motor following inverter failure

(57) A multiple-wound, three-phase, variable speed motor 1 having N independent winding sets is driven by N inverters, each responding to 1/N of the torque and excitation current commands, and the torque current is limited as a function of N times the limiting current each inverter may tolerate, when all inverters are functioning. When M inverters fail, they are disconnected from the motor, the torque current is limited as function of N-M times the limiting current each inverter may tolerate. The

remaining N-M inverters may each respond to 1/(N-M) of the torque and excitation commands. The excitation current may be maximized as (N-M) times the limiting current divided by the square root of two. The speed command may be predetermined by the integration over an acceleration interval, of the maximum acceleration achievable with torque available from those of the inverters which have not failed, in view of the inverters' current limits.





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